

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method for treating prostate and breast cancer, comprising administering to a patient that has prostate or breast cancer a protein that comprises a receptor-antagonizing domain and a positive immunomodulator domain, wherein the receptor-antagonizing domain comprises SEQ ID NO: 35 but has an amino acid substitution at position 129, and the positive immunomodulator domain is a cytokine selected from the group consisting of IL-2, IL-12, and IFN γ .

2-3. (Canceled)

4. (Previously Presented) The method according to claim 1, wherein the cytokine is IL-2.

5. (Previously Presented) The method according to claim 1, wherein the cytokine is IL-12.

6. (Previously Presented) The method according to claim 1, wherein the cytokine is IFN γ .

7-21. (Canceled)

22. (Previously Presented) The method according to claim 1, wherein cells of the cancer overexpress a prolactin receptor at levels greater than in normal, healthy cells.

23-27. (Canceled)

28. (Previously Presented) A method for inducing an immune response in an individual that has cancerous prostate or breast cells, comprising administering to said individual a protein comprising (i) a prolactin-antagonist domain comprising SEQ ID NO: 35 but has an amino acid substitution at position 129, and (ii) an immunomodulatory domain,

wherein said immunomodulatory domain is a cytokine selected from the group consisting of IL-2, IL-12, and IFN γ .

29. (Previously Presented) The method of claim 28, wherein said prolactin-antagonist domain comprises a protein consisting essentially of the amino acid sequence of SEQ ID NO. 34.

30-33. (Canceled)

34. (Previously Presented) The method of claim 28, wherein the amino acid at position 129 is arginine.

35. (Previously Presented) The method of claim 28, wherein said cancerous cells express prolactin receptors at a level greater than that of normal, healthy cells.

36. (Canceled)

37. (Previously Presented) The method of claim 28, wherein said cytokine is IL-2.

38. (Previously Presented) The method of claim 28, wherein said cytokine is IL-12.

39. (Previously Presented) The method of claim 28, wherein said cytokine is IFN γ .

40-44. (Canceled)

45. (Previously Presented) A method for inducing an immune response in an individual that has cancerous prostate or breast cells, comprising administering to said individual a protein comprising (i) a domain that binds to a receptor expressed on a cancer cell altering the function of said receptor, and (ii) another domain that elicits an immune response that is targeted to said cancer cell, wherein the domain that binds to a receptor expressed on a cancer cell is a prolactin antagonist domain comprising SEQ ID NO: 35 but has an amino acid substitution at position 129, and the domain that elicits an immune response is a cytokine selected from the group consisting of IL-2, IL-12, and IFN γ .

46. (Previously Presented) The method of claim 45, wherein the prolactin-antagonist domain has an arginine at position 129.

47. (Previously Presented) The method of claim 46, wherein the prolactin-antagonist domain comprises SEQ ID NO. 34.

48-60. (Canceled)

61. (Previously Presented) The method of claim 1, wherein the receptor antagonizing domain comprises SEQ ID NO: 34.

62. (Previously Presented) The method of claim 1, wherein the amino acid at position 129 is a bulky side-chain amino acid.

63. (Previously Presented) The method of claim 28, wherein the amino acid at position 129 is a bulky side-chain amino acid.

64. (Previously Presented) The method of claim 29, wherein said cancerous cells express prolactin receptors at a level greater than that of normal, healthy cells.

65. (Canceled)

66. (Previously Presented) The method of claim 29, wherein said cytokine is IL-2.

67. (Previously Presented) The method of claim 29, wherein said cytokine is IL-12.

68. (Previously Presented) The method of claim 29, wherein said cytokine is IFN γ .

69. (Canceled)

70. (Canceled)

71. (Canceled)